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***Flying Operations***

**AIRCRAFT OPERATIONS AND MOVEMENT  
ON THE GROUND**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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Air Force Instruction (AFI) 11-218, *Aircraft Operations and Movement on the Ground*, 1 August 2002, is supplemented as follows.

***SUMMARY OF REVISIONS***

**This document is substantially revised and must be completely reviewed.**

Engine training, evaluation, and certification procedures have been removed from this supplement and placed in ANGI 21-101, *Aerospace Equipment Maintenance Management*.

1.4.1.2. (Added) Aircraft with self-sufficient start capability do not have to turn on aircraft position lights prior to engine start. Position lights will be turned on as soon as aircraft power is available.

1.9. **Use of Simulators.** Maintenance Training notifies the wing simulator training officer of Aircrew Training Devices (ATD) requirements. **NOTE:** See ANGI 21-101 for alternate evaluation/certification procedures if training devices are not available.

1.10. **Start, run-up and Test of Engines.** The training certification/proficiency requirements maintenance engine runs are outlined in ANGI 21-101.

1.11.1. Maintenance personnel will only taxi aircraft with Air National Guard Directors of Logistics and Operations (ANG/LG/XO) approval and have completed a locally developed qualification course including marshaling. Personnel authorized for taxi will complete at least one taxi every 90 days to maintain proficiency. A qualified taxi instructor will re-evaluate personnel not maintaining proficiency before they perform their next aircraft taxi.

1.11.4. (Added) Safe ground handling of aircraft is totally dependent upon positive communication, using eye contact and marshaling signals, between the pilot and ground marshalers. The pilot and ground marshalers monitor the wing tip walkers. The ultimate responsibility for the aircraft rests with the pilot.

Ground marshalers provide the pilot with correct and timely marshaling signals. If aircraft movement differs in speed or direction from the marshaler's desires, the marshaler gives the pilot the SLOWDOWN/STOP signal. When further movement can be accomplished safely, continue marshaling the aircraft to the proper position.

1.11.5. (Added) High Speed Taxi checks are accomplished IAW ANGI 21-101.

1.12.1. Additional tow requirements are outlined in AFOSH Standard 91-100, *Aircraft Flight Line – Ground Operations and Activities*.

1.12.2. Document training (test completion) in the Maintenance Information System (MIS).

1.12.3. (Added) Personnel authorized to occupy cockpit positions of C-130, HH-60, or KC-135 aircraft are certified as tow brake operators by a qualified tow supervisor.

1.12.4. (Added) Follow all towing procedures listed in applicable towing checklists when towing aircraft without brake pressure. In addition, the following requirements apply:

1.12.4.1. (Added) Group commander or designated representatives approve all towing without brake pressure.

1.12.4.2. (Added) Radio communication is available when crossing runways and active taxiways to maintain communications with the Maintenance Operations Center (MOC)/Control Tower, as applicable.

1.12.4.3. (Added) The tow team consists of the required personnel listed in the applicable towing checklist with the following exceptions:

1.12.4.3.1. (Added) Additional personnel are required to chock walk the aircraft. Position personnel outboard of each landing gear strut requiring chocks in accordance with applicable towing checklist. Each individual drags or carries a minimum of one set of chocks. Ensure additional chocks are available to properly chock the aircraft in the event of an emergency stop.

1.12.4.4. (Added) In the event of an emergency stop where the towing vehicle cannot stop the aircraft, the chock walkers insert, from the side, a chock in the front or rear of their respective landing gear tires, depending on forward or aft movement. The chock walkers should attempt to insert the chocks simultaneously, if possible. **WARNING:** Personnel inserting chocks in an emergency, while the aircraft is moving, immediately move in the opposite direction the aircraft is moving in the event the chock is ejected or expelled.

1.12.5. (Added) Prior to towing an aircraft from fuel cell hangars or designated fuel locations, the tow team supervisor coordinates with the fuel section supervisor to ensure the aircraft is safely configured to tow.

1.12.6. (Added) Refer to applicable aircraft towing checklist for emergency stop communication equipment.

1.13.1. Personnel who marshal aircraft take a written marshaling test administered by Maintenance Training. Minimum passing score is 70 percent corrected to 100 percent. Trainers will conduct practical evaluations in the duty section. Evaluate all marshaling signals applicable to unit/MDS.

1.13.2. Document training in Career Field Education Training Package (CFETP) or AF 797, *Job Qualification Standard, Continuation/Command JQS*; and/or MIS.

1.13.4. (Added) Launch and Recovery requirements are outlined in MDS applicable technical orders and AFOSH STD 91-100. The crew chief briefs all assistants on their responsibilities and performs normal

launch procedures. The assistant stands by the fire bottle through engine start sequence and then performs duties as directed by the crew chief or is released.

1.15.5. (Added) Establish in an Operation Instruction (OI), the maximum Revolutions per Minute (RPM) limitations (Jet) or maximum torque limitations (Turbo-Prop), for parking areas and other high traffic/congested areas. It may also include minimum fuel loads or any local restrictions for engine runs.

1.15.6. (Added) The fire chief, IAW AFI 32-2001, *The Fire Protection Operations and Fire Prevention Program*, determines if a fire fighting vehicle stands by in the immediate vicinity when an aircraft is in an isolated area. During initial installed engine runs and engine runs for fuel/oil line and component leak checks this requirement is at the discretion of the production superintendent and the Fire Chief. When used, this vehicle remains in position until the integrity of the fuel/oil system is verified. If the initial leak check was completed and no problems were observed, the engine run is not terminated if the fire fighting vehicle is required to respond to an emergency. A standby fire fighting vehicle is not required during external fuel tank leak and transfer checks. Ensure adequate lighting is used during night engine runs to facilitate leak detection. When running engines in a hush house, a fire truck is not required if the hush house fire suppression system is fully operational.

1.15.6.1. (Added) Notify the control tower and fire department anytime cartridge starts are scheduled.

1.15.7. (Added) Maintenance personnel operating fighter type aircraft are exempt from using seat belt and shoulder harness during engine maintenance runs. Use seat/lap belts when performing maintenance runs on all other type aircraft.

1.22.4. (Added) ANG fighter type aircraft may taxi to or from parking spots and alert hangars that do not provide the minimum 10-foot clearance, but no less than 5 feet from obstacles when:

1.22.4.1. (Added) The obstacles are specifically associated with a parking spot, specifically designed for operation of locally based aircraft.

1.22.4.2. (Added) A taxi stripe and marshalers are used.

1.22.4.3. (Added) Moveable equipment is placed in designated areas with access doors and panels closed.

1.22.4.4. (Added) No turns are necessary while any part of the aircraft is within 10 feet of an obstacle.

1.22.4.5. (Added) Parking spots/locations are assigned waivers approved by the Operations Group Commander.

1.22.4.6. (Added) Pilot local orientation includes procedures, techniques, and cautions for taxiing under these waiver circumstances.

2.3.1.4. (Added) When USAF ground marshalers are not available, the pilot on cargo and transport type aircraft use crew members or crew chiefs as marshalers, provided they can deplane safely with engines running and are familiar with AFI 11-218 marshaling signals. All crew members and crew chiefs used as marshalers are thoroughly briefed on deplaning and signaling procedures.

2.3.1.5. (Added) On fighter type aircraft, marshalers may position themselves forward of the wing in the direction of taxi, provided both wing tips can be viewed to clear obstructions and in full view of the pilot. This enables the marshaler to stand inside the aircraft's turn and provides protection from injury due to jet blast. Marshal all other aircraft IAW the basic regulation and NATO standards.

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFOOSH STD 91-100, *Aircraft Flight Line – Ground Operations and Activities*

***Abbreviations and Acronyms***

**ANG**—Air National Guard

**ATD**—Aircrew Training Devices

**MIS**—Maintenance Information System

**MOC**—Maintenance Operations Center

**OI**—Operation Instruction

**RPM**—Revolutions per Minute

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